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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,736	02/18/2004	Chen Lung Kuo	08954.0014	2073
22852	7590	05/23/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			CHEN, WEN YING PATTY	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/779,736	Applicant(s) KUO, CHEN LUNG	
	Examiner Wen-Ying P. Chen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-9, and 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawasaki et al. (US 2001/0026347A1).

With respect to claims 1, 4, 7 and 13: Sawasaki et al. disclose in Figure 48 a liquid crystal display panel comprising: a first substrate (element 240); a second substrate (element 230); a liquid crystal layer (element 259) sandwiched between the first substrate and the second substrate; a plurality of first protrusions (element 251) disposed on the first substrate and separated from the second substrate by a first distance; and a plurality of second protrusions (element 252) disposed on the first substrate and separated from the second substrate by a second distance different from the first distance. Sawasaki et al. disclose in Paragraph 0291 that the first and second protrusions vary with a height of about 0.4 μ m and made of the same material (Paragraph 0277), and since the first protrusion comes in contact with the second substrate (with a gap distance approximately equal to zero), therefore, the second protrusion is separated from the second substrate at a distance of 0.4 μ m, which is smaller than 2.5 μ m and larger than 0.2 μ m.

As to claims 2-3 and 11-12: Sawasaki et al. disclose that the first protrusion is provided for maintaining a first cell gap between the first and second substrates (Paragraph 0227) and the

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second protrusion for maintaining a second cell gap which is smaller than the first cell gap between the first and second substrates when the liquid crystal display panel is subjected to an external force (Paragraph 0223).

As to claims 5 and 14: Sawasaki et al. disclose in Figure 48 that the first and second protrusions (elements 252 and 251) have a pillar shape.

As to claim 8: Sawasaki et al. disclose in Paragraphs 0276 and 0277 and as can see in Figure 48 that a plurality of third protrusions (element 246a) disposed on the first substrate are made of a different material than that of the material of the first and second protrusions.

As to claim 9: Sawasaki et al. disclose in Paragraphs 0227 and 0228 that the first and second protrusions are formed so to act as rigid supports for the substrates, therefore, are harder than the third protrusions.

As to claims 15-19: The limitations of claims 15-19 are disclosed by Sawasaki et al. as set forth in the previous claims, which contain the same limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawasaki et al. (US 2001/0026347A1).

Sawasaki et al. disclose in Figure 48 all of the limitations set forth in the above claims, but fail to specifically disclose that the third protrusions have the functionality of regulating the orientation of the liquid crystal layer. However, in another embodiment disclosed by Sawasaki et al., a plurality of short protrusions (Figure 4, element 25b) are constructed as to have the functionality of orienting the liquid crystal layer (Paragraph 0096).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the liquid crystal display as taught by Sawasaki et al. disclosed in Figure 48 with the third protrusions having the liquid crystal orienting functionality as taught by Sawasaki et al. in another embodiment of the same invention so that the good visual characteristic and the good contrast characteristic of the liquid crystal display can be obtained, as taught by Sawasaki et al. (Paragraph 0096).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim et al. (US 2003/0112405A1), Liu et al. (US 657965).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Ying P. Chen whose telephone number is (571)272-8444.

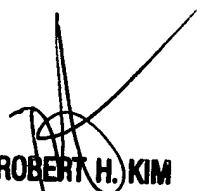
The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Ying P Chen
Examiner
Art Unit 2871

wpc


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800